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Notice of Allowability

Application No.

10/766,187

Examiner

Zhuo H. Li

Applicant(s)

SUZUKI ET AL.

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/14/2005.
2. ☒ The allowed claim(s) is/are 1-8 and 10-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 6/14/05 & 1/29/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Handwritten signature

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

1. Claims 1-8 and 10-18 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Applicant's invention is drawn to a disk array device and method for remote copying control a disk array device with a preset transferring specified value for each logical system partitions in memory device in order to prevent any interferences between respective users, and makes it possible to provide a much more stable business environment (i.e., a data transfer control part in a disk array device which compares a specified value that is preset for each of the logical system partitions which defined in the memory device, and the data transfer amount detected by the transfer amount detection part, and perform band control that limits the transfer of data from the logical system partitions to the external device in cases where the data transfer amount exceeds said specified value, and further limits data transfer by delaying the response to a data write requests from host device by a specified preset time in cases where the data transfer amount exceeds a specified value in order to prevent a drop in the response characteristics while ensuring the reliability of data transfer).

Applicant's independent claims 1 and 12, each recites, *inter alia*, a disk array device (10) with a structure as defined in the specifications (pages 13-24 and 30-35) including a transfer amount detection part (250), which detects the amount of data transferred to the external device from the logical system partitions (41) for each of the logical system partitions, and a data transfer control part (240) which compares a specified value that is preset for each of the logical system partitions and the data transfer amount detected by the transfer amount detection part, and

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performs bank control (241) that limits the transfer of data from the logical system partitions to the external device in cases where the data transfer amount exceeds the specified value, and wherein the data transfer control part limits data transfer by delaying the response to a data write request from the host device by a specified preset time when the data transfer amount exceeds the specified value. Applicant's independent claims 1 and 12 each comprises a particular combination of elements, which is neither taught nor suggested by the prior art.

Applicant's independent method claims 13 and 14 each recites, *inter alia*, detecting the amount of data transferred from the logical system partitions to the external device for each of the logical system partitions, comparing a specified value that is preset for each of the logical system partitions with the detected data transfer amount, and limiting the transfer of data from the logical system partitions to the external device by delaying the response to a write request from the host device by a preset specified time when it is judged that the data transfer amount exceeds the specified value. These steps, in combination of the remaining steps, are neither taught nor suggest by the prior art.

Accordingly, Applicant's claims are allowed for these reasons.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhuo H. Li whose telephone number is 571-272-4183. The examiner can normally be reached on M-F 9:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BEHZAD JAMES PEIKARI
PRIMARY EXAMINER

Zhuo H. Li



Patent Examiner
Art Unit 2189
September 27, 2005